



# **Texas Renewables 2001: A Very Good Year**

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**VERA**

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# Historical Battles Shape Future Victories

**Active Activists – since mid 70s** (renewables & environmental leaders have worked cooperatively & effectively for 2+ decades)

**Deliberative Polls – 1996/98** (8 Utility events that transformed attitudes of utility executives and regulators toward renewables)

**Green Pricing Rule – 1998** (PUC's pro-consumer rule prevented bad green power products from coming to market)

**150 MW of IRP construction – 1999** (there's no substitute for real projects getting built.... and constituents embracing them)

**SB7 Restructuring Law & Renewable Mandate Rule - 1999** (quality legislation & well-conceived rulemaking ignite market)

**2001 – 1000 MW of new renewables under construction**



## 4 out of 5 Texas Consumers Want Cleaner Energy

*Utility Customer Deliberative Poll Results for 8 Utilities in Texas*

**First Choice Preference** (assuming cost same)

**49%** prefer **Renewables** (Solar, Wind, Biomass)

**31%** prefer **Reduce Need** (Energy Efficiency)

**14%** prefer **Fossil** (Gas, Coal)

**5%** prefer **Buy & Transport** from others

**Willingness to Pay More**

**+\$5.00/month** more for **Renewables**

**+\$2.00/month** more for **Efficiency**

**\$0** more for **coal, natural gas & purchase**

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Source: Utility Deliberative Polls (1996-1998)

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# Customer Choice Legislation



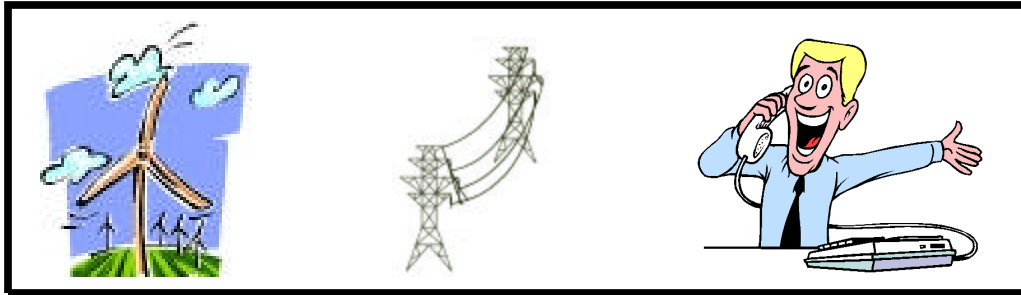
- Customer choice begins:  
January 1, 2002
- Municipal utilities and coops decide  
on competition
- Mandates for renewable resources,  
energy efficiency
- Clean-up of dirty plants



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# Texas' New Electric Industry

## OLD WAY - Monopoly



Monopoly Utilities



Customer

## NEW WAY - Choice



Competitive  
Generators



Wires  
Utilities



Competitive  
Retailers

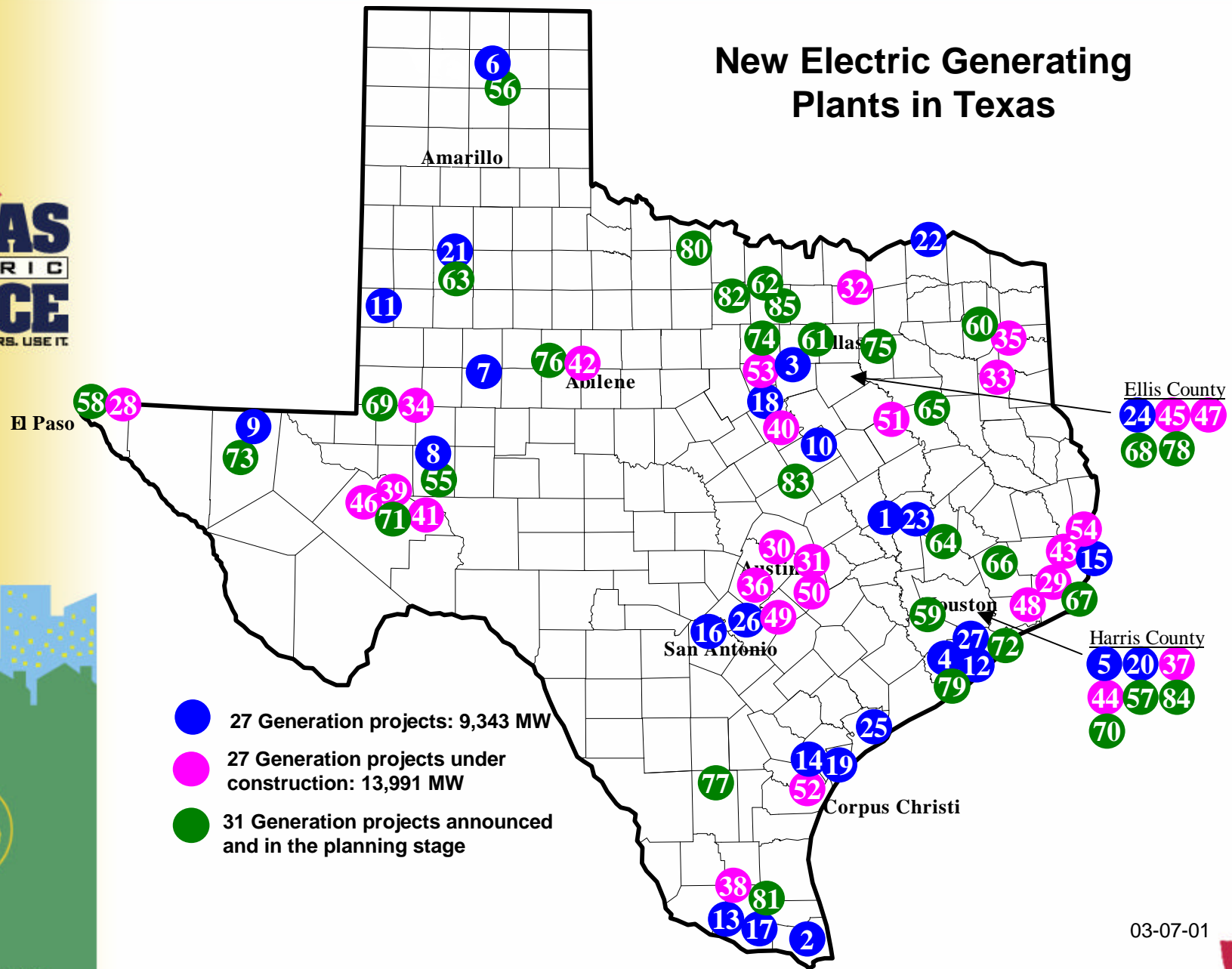


Customer



# New Electric Generating Plants in Texas

**TEXAS**  
ELECTRIC  
**CHOICE**  
THE POWER IS YOURS. USE IT.



03-07-01

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Burson-Marsteller



# Texas Renewable Energy Mandate

**SB 7 Law** – cumulative installed renewable capacity shall total:

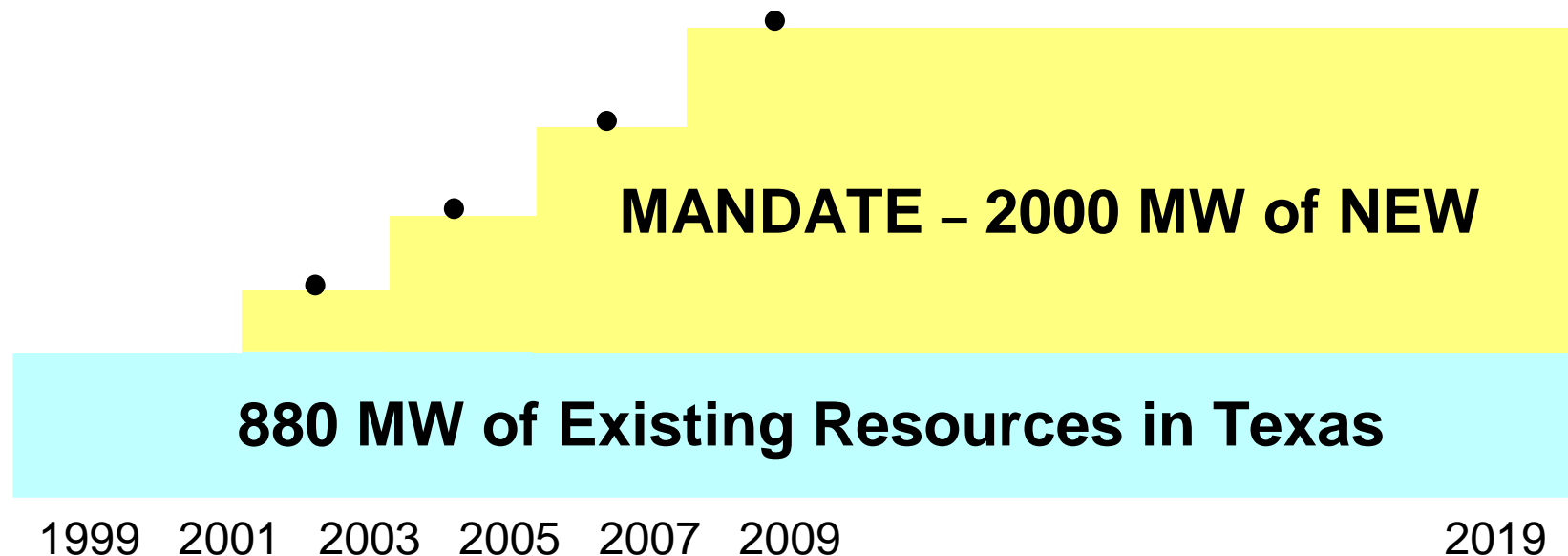
**1,280 MW** by 2003

**1,730 MW** by 2005

**2,280 MW** by 2007

**2,880 MW** by 2009

**PUCT Rule** – Requires REC's for additional 10 yrs



# What is a Texas Renewable Energy Credit

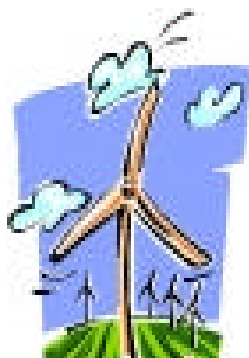
- ✍ **Tradable instrument that represents 1 MWh of renewable energy generation metered in Texas**
- ✍ Defined by a “Tag” that describes the generation (vintage, technology type, facility ID, etc.)
- ✍ Credits can trade independent from energy
- ✍ Advantages:
  - **“Market-Based” Subsidy**
  - **Low Compliance Cost**
  - **Authenticity**
  - **Flexibility**



# Texas REC Program ? The Basics



**Retailers** MUST acquire specified quantity of credits or face penalties of up to **\$50/MWh**



**Renewable Generators** earn credits based on production



**Others** in Texas REC Market — traders, enviro organizations, individuals.... anyone may participate



# Texas Renewable Energy

Approx. 1,000 MW of New Projects Announced Since 1999

**New Announcements = 1,000 MW**

Wind = 900 MW

BioEnergy 50 MW (landfills)

Hydro = 50 MW (renovations)

Solar < 1 MW



Texas Wind Farms  
Hydroelectric Facilities  
Solar Projects  
Landfill Gas to Energy  
Underline Indicates  
Announced Project



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# Texas Among Best Renewables Markets in U.S.

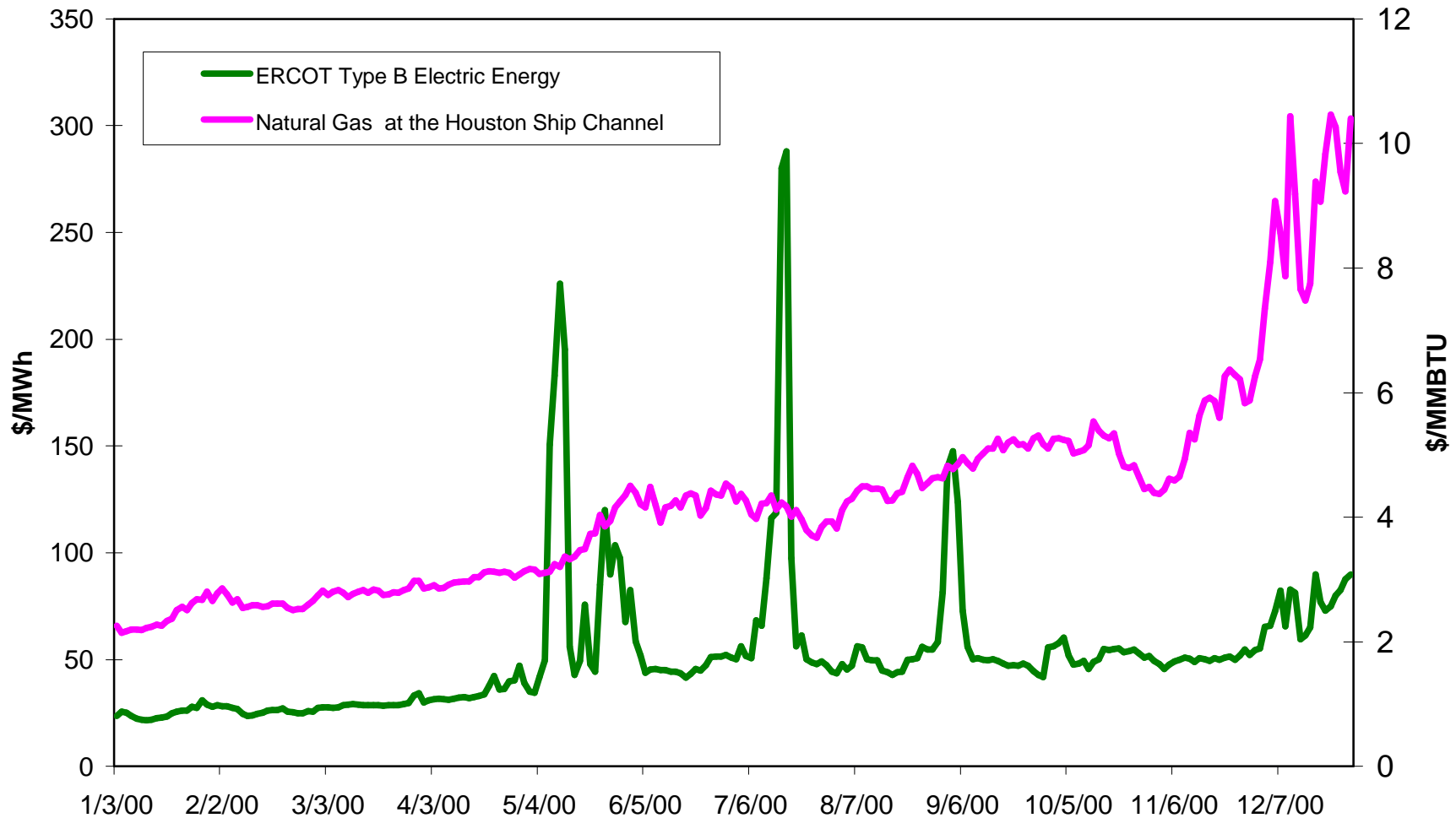
- ✍ Effective Energy Policy & Decision Making
- ✍ Extraordinary renewable resources
- ✍ Favorable electric transmission rules
- ✍ Opportunities for large installations
- ✍ Cost effectiveness

# Good RPS = Wind Power Contracts

	Approx. 2002 RPS Obligation (MW)	2001 Wind Contracts (MW)	
<b>TXU</b>	<b>170</b>	<b>323</b>	<i>Entities that were REQUIRED to get renewables, made very large acquisitions of wind (more than their requirement); RPS also stimulated voluntary market .... Net result is wind alone far exceeds RPS requirements (&gt; 2X)</i>
<b>Reliant</b>	<b>140</b>	<b>208</b>	
AEP	0	0	
Entergy	0	0	
<b>Excel-SPS</b>	<b>40</b>	<b>80</b>	
TNP	2	3	
<b>Enron</b>	<b>15</b>	<b>130</b>	
Other New Players	33	?	
Austin	0	<b>80</b>	<i>Wind contracts driven by customer preferences ("Green Pricing")</i>
LCRA	0	<b>50</b>	
San Antonio	0	<b>25</b>	
El Paso	0	<b>1</b>	
<b>Totals</b>	<b>400 MW</b>	<b>900 MW</b>	

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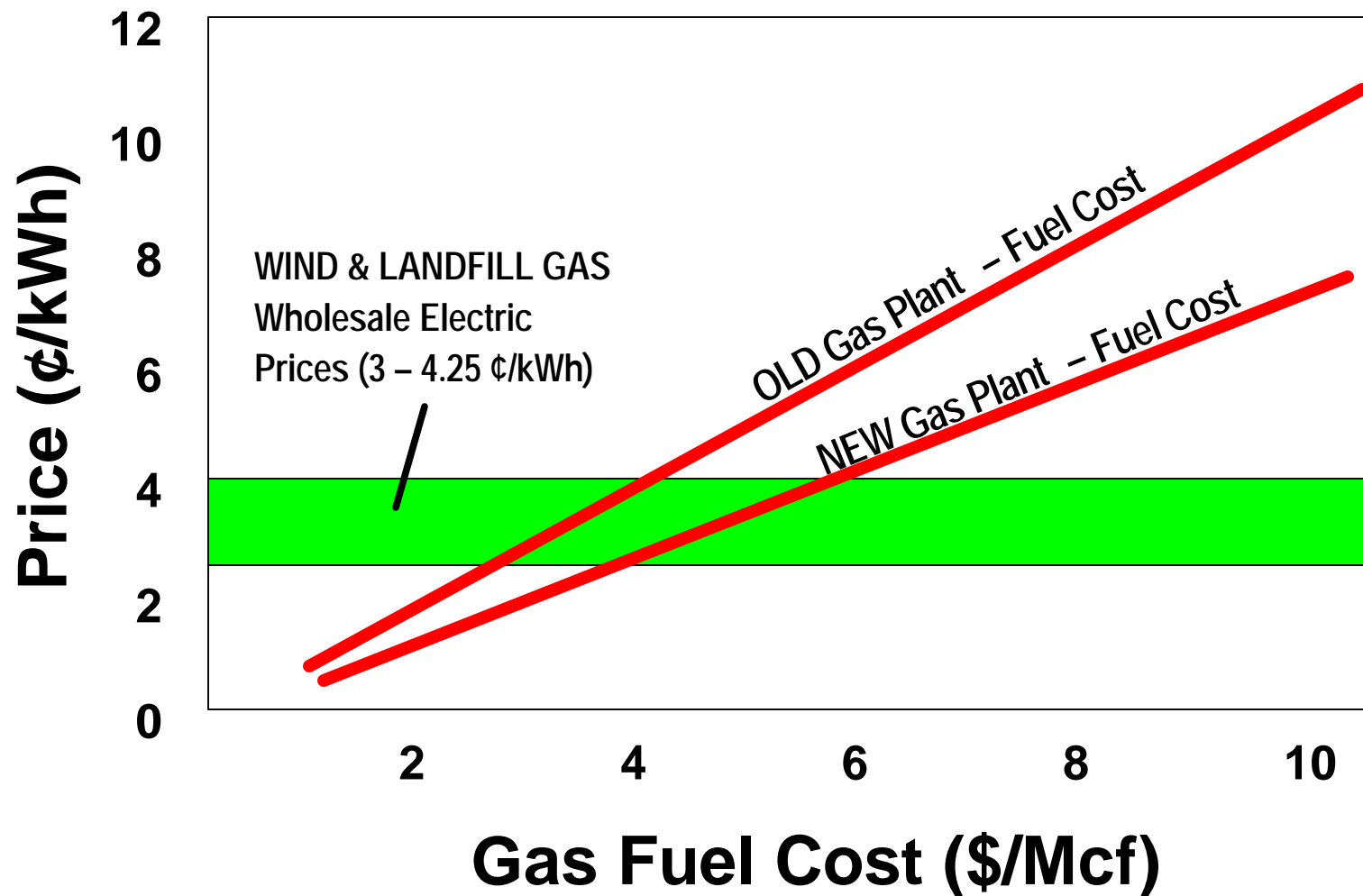
# Comparison of Spot Prices for Electricity and Natural Gas in 2000



Data Source: Megawatt Daily, published by Financial Times Energy

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# Renewables “Value” Linked to Gas Prices



# Texas Renewable Credits Market

For the latest information on  
the Texas REC market, go to:  
[www.texasrenewables.com](http://www.texasrenewables.com)

